

Washington State On-Site Wastewater Technical Review Committee

Summary Minutes for the May 20-21, 1999 Meeting

Approved on September 10, 1999 by Vote of the Committee

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MEETING ATTENDEES

Members Present

Dean Bannister
Kevin Barry
Clifford Bates
Bob Monetta
Charles Mortimer
Tom Rogers
Bob Sylvester
Mike Vinatieri

Kyle Dorsey, Dept of Ecology
Darlene Frye, Dept of Ecology
Greg Schuler, Dept of Ecology
W.M. Prigger
Brandon Nation
Bob MacShane
Wanda Shewbert
Lou Hagler
Larry Olson

Members Absent

Lisa Palazzi

Guests Who Signed In

Larry Warnberg
Jack Hayes
Dustin Bilhimer, Dept of Ecology

DOH Staff

Wayne Turnberg, TRC Coordinator
Mark Soltman, Facilitator
Richard Benson
Lisa Brown

INTRODUCTION - The two day meeting (May 20-21, 1999) was called to order by Charles Mortimer at approximately 8:15 a.m. on May 20, 1999 (Day 1) and at approximately 8:15 a.m. on May 21, 1999 (Day 2) in the Elaine Wright Room of the Munson Retreat Center, Central Washington University, Ellensburg, Washington.

SUMMARY OF TECHNICAL DISCUSSIONS

Composting Toilets – Wayne Turnberg lead the discussion on revisions needed for the composting toilet RS&G. By consensus, the TRC recommended that the DOH move forward on the following initiatives, to amend the existing RS&G document in a new draft, and to bring this draft back to the TRC for further review:

1. Provide specific direction in the RS&G to address the requirements of 40 CFR Part 503 and Chapter 173-308 WAC with regard to the disposition of the final product;
2. Provide additional language as a safety net for untested non-proprietary systems by specifying criteria found in the vault toilet RS&G, should composting not occur and pumping be required;
3. Provide guidance with regard to the elements of the composting process;
4. Add language to address site issues:
 - The physical structure itself (e.g., water tight tank – treat like a septic tank, e.g., for both vertical and horizontal separation
 - Leachate or urine from the system (e.g., treat with standard sewage, septic tank, and drainfield setbacks;
 - Vertical and horizontal separation from disposal of the composted material
5. Add descriptions regarding residential vs. recreational use for these systems;
6. Add a statement that the DOH does not review and list non-proprietary composting toilet systems.

Mound Systems - Wayne Turnberg provided an overview of the DOH's orientation sessions conducted for local health jurisdiction personnel during March 99, prior to the April 5, 1999 effective date for the newly adopted RS&G documents on alternative on-site wastewater systems. During the orientation sessions, input was received from the LHJ attendees, which is summarized in the DOH document referenced in the box above. As a result of this input, the DOH is now in the process of revising the Mound Systems RS&G document to correct inconsistencies that were identified during the discussions. One inconsistency involved the daily design flow specification for mound systems, which is inconsistent with that of the intermittent sand filter and the sand lined trench specifications. Following intensive discussion, by a vote of 5 in favor / 3 opposed, the TRC recommends that the DOH amend the Mound Systems document to reflect a daily design flow of 120 gpd and an application rate of 1.0 gal/ft sq/day.

Recirculating Gravel Filters – Lisa Brown lead the discussion on the most recent draft of the RGF document. Dean Bannister presented information that he had collected through a telephone survey from key researchers from around the country. Dean suggested that the document be revised to offer greater flexibility through guidance, and recognizing that the system may be used for more than one end result (e.g., denitrification, fecal coliform reduction). Outstanding issues include those associated with splitting and dosing mechanisms. By general consensus, the TRC recommended the following to the DOH:

- The DOH will issue a statement on the internet through its web page that the Recirculating Gravel Filter RS&G document is still under revision by the TRC, and until such time as a new version is released by the DOH, that the sections applicable to RGFs found in the Guidelines for Sand Filters, June 1996 remain in effect.
- Dean Bannister will work with Lisa Brown to complete the proposed changes to the RGF document, focusing on the technical issues of splitting and dosing mechanisms.

- Lisa Brown will complete the RGF draft during the summer, and that the revised draft will be presented to the TRC for their review and action during the September 9-10, 1999 meeting, with the goal to have that document ready for a TRC recommendation to adopt at that meeting.

Stratified Sand Filters – Lisa Brown lead the discussion on the Stratified Sand Filters document revision. Lisa noted that concern had been raised regarding the need for the guidance document. Dean Bannister opposed tabling of the document, which was supported by the committee through general consensus. Dean noted that the most significant technical issue needing attention involved that of proper venting. By general consensus, the TRC recommended that:

- The Stratified Sand Filter guidance document will not be tabled.
- The DOH will issue a statement on the internet through its web page that the Stratified Sand Filter RS&G document is still under revision by the TRC, and until such time as a new version is released by the DOH, that the sections applicable to SSFs found in the Guidelines for Sand Filters, June 1996 remain in effect.
- The current Stratified Sand Filter document that appears in the Guidance for Sand Filters, June 1996 will be reformatted into the current RS&G format.
- The only technical revision to be addressed in the next revision will be the issue of venting. This will be addressed by Lisa Brown and Dean Bannister before the next TRC meeting.
- A new draft document will be prepared by Lisa Brown for review by the committee, with a goal of recommendation to adopt by the committee during the September 9-10, 1999 TRC meeting.

Subsurface Drip Systems for Combined Wastewater – Richard Benson presented several technical issues to the TRC for recommendation. The TRC provided recommendations as follows:

- Peak flow storage capacity (pump chamber sizing) for single family residences - By consensus, the TRC recommended that the document stay with the existing pressure distribution requirements as the standard, but acknowledge that the manufacturer may have more appropriate information based on the experience of their own equipment through guidance.
- Flow meters, event counters/elapsed time meters - By consensus, the TRC recommended that the document stay with the existing pressure distribution standard on flow meters, event counters as a standard, with guidance on additional methods that may be added.
- Controller requirements (automatic except vs. manual flushing) - By a vote of 7 in favor / 1 abstain, the TRC recommended that automatic flushing controllers be required for homeowner systems.

Aerobic Treatment Units – Mark Soltman lead the discussion on the most recent draft ATU RS&G. Based on the discussion, the TRC made the following recommendations:

- Effluent Screening – By unanimous vote, the TRC recommended that the requirement for effluent screening be dropped from the document. This includes all of Section 2.11, including the guidance box in that section.
- Sampling Ports – Figure 1 – By consensus, the TRC recommended that Figure 1 on page 15 of the draft ATU document be revised to be more to scale, that the term “ribbed” be removed, and that the figure retained for its guidance purpose.
- Certification of ATU with Disinfection Equipment – By unanimous vote, the TRC recommends that the DOH modify the existing ATU RS&G by including a requirement for certification to help identify the appropriate match of ATU to disinfection equipment, and that the certification be done by a licensed engineer either on a “site-by-site” basis or a “typical system” basis, or by the ATU product manufacturer. [Note: This would apply to Column B of the Version “A” Table below.]
- Drainfield Sizing Table – By general consensus, the TRC recommended that the Version A table (above) be incorporated into the next version document, amending Column D by changing 75% to 100% in the minimum installed size categories for initial and replacement drainfields, recognizing that further examination and discussion will be held on that issue.

- **Site Limitations and System Complexity** – By unanimous vote, the TRC recommended that the DOH add the basic language about site limitations and system complexity, as addressed on pages 31 and 32 of the draft ATU document, to all of the appropriate alternative technology documents.
- **General Changes** - By general consensus, the TRC recommended that the next version draft include the general changes proposed in the current draft version.
- **ATU Categories 1-3** - By consensus, the TRC recommends that the proposals identified in the “green” 5/19/99 ATU13b.1.doc draft addressing three ATU categories be integrated by the DOH into the next ATU draft version. The review schedule leading towards the final ATU RS&G adoption identified in the discussion above should be followed.

ADMINISTRATIVE/OTHER ISSUES

Local Health Jurisdiction RS&G Orientations – Wayne Turnberg provided an overview to the TRC regarding the DOH’s RS&G orientation sessions that were conducted from six locations around the state for the state’s LHJs during March 1999. A copy of the DOH’s “Recommended Standards and Guidance Orientations – Identified Inconsistencies and Clarification Requests (Draft May 7, 1999)” document, which identified various issues in the RS&G documents for review, was distributed to the committee members. Of note, comments received during the orientation sessions will be addressed during the next RS&G revision process, with the exception of two documents: 1) Pressure Distribution – this RS&G document was revised to remove an out of place paragraph, and has been posted on the DOH web page; and 2) Mound Systems – this RS&G document is currently being revised by DOH to correct inconsistencies that were identified during the orientation sessions. The revised document is scheduled for release later this summer. Until its release, the Mound Systems document, which was finalized on December 31, 1998 will remain in effect.

March 4-5, 1999 Meeting Minutes Adoption – By unanimous vote, the committee approved the March 4-5, 1999 TRC meeting minutes without changes.

Election of TRC Chair – By a unanimous vote of the committee, Mike Vinatieri was selected to serve as TRC Chair for the September 1999 – September 2000 period, and Bob Monetta from the September 2000 – September 2001 period.

TRC Process Manual – By consensus, the TRC recommended to revise the TRC Process Manual by including a policy regarding selection of the TRC Chair. The Chair will be selected by the committee, and shall serve for a one year period of time. The TRC may select multiple chairs for succeeding years. The TRC may also select a standing Chair to serve for another year.

Upcoming TRC Vacancies – Three vacancies must be filled prior to the September 9-10, 1999 TRC meeting. These vacancies have been created by the departure of Charles Mortimer, representing engineers, and Bob Sylvester, representing the Department of Ecology. Mort and Bob have each completed two three-year terms of service on the TRC. The last vacancy to fill will be that of a soil scientist following the departure of Lisa Palazzi, who has taken a maternity leave from the committee following the birth of her twins. Various names of potential candidates were discussed by the TRC. The DOH will develop a replacement process, and seek to have these vacancies filled during the next two months. Names of candidates and other pertinent information will be distributed to the TRC members for comment prior to the DOH decision.

Next Meeting – The next TRC meeting is scheduled for September 9-10, 1999 at the Courson Conference Center, Central Washington University, Ellensburg, Washington.

LIST OF MEETING MATERIALS

Administrative/Other Materials

- Meeting agenda, May 20-21, 1999
- Draft TRC Meeting Minutes – March 4-5, 1999
- Washington State Department of Health. Recommended Standards and Guidance Orientations – Identified Inconsistencies and Clarification Requests (Draft May 7, 1999). Transmitted from Wayne Turnberg/Selden Hall, DOH to the local Environmental Health Directors of Washington state by memorandum dated May 10, 1999.

Composting Toilets

- Summary of federal and state regulations applicable to disposition of products from composting toilets (prepared by the Department of Ecology)
- U.S. Environmental Protection Agency. Subchapter O – Sewage Sludge / Part 503 – Standards for the Use or Disposal of Sewage Sludge. *Federal Register*, Vol. 58, No. 32, pp. 9387 – 9404. Friday, February 19, 1993.
- Washington State Department of Ecology. Chapter 173-308 WAC [Biosolids Management], Ecology Ed. Last update: 2/18/98.
- Washington State Department of Health. Waterless Toilets, Section A. In: Water Conserving On-Site Wastewater Treatment Systems, Recommended Standards and Guidance for Performance, Application, Design, and Operation & Maintenance, Olympia, Washington. Approved by the DOH on December 31, 1999.
- Proposed Guideline for Non-Proprietary/Generic Composting Toilets, and Annotated Bibliography. Transmitted from Tom Long, DOH to the Non-Proprietary Compost Toilet Task Force membership by memorandum dated May 18, 1998.
- Jenkins JC. The Humanure Handbook: A Guide to Composting Human Manure, Chapters 5-7. Jenkins Publishing, Gvove City, PA. 1994.
- Castor D. Biosolids/Compost Report (data sheet) for data compiled from composting toilets in San Juan County. Data analysis report prepared by Udder Health Systems, Inc. March 1999.
- Enferadi KM, Cooper RC, Goranson SC, Olivieri AW, Poorbaugh JH, Walker M, and Wilson BA. A Field Investigation of Biological Toilet Systems and Grey Water Treatment. State of California, Department of Health Services, USEPA Grant Number R805942-01. 1985.
 - Powerpoint presentation summary of findings (Turnberg WL)
- National Sanitation Foundation. Standard Number 41 – Wastewater Recycle/Reuse and Water Conservation Devices, Revised 1983.
- Warnberg L. Solar Composting Advanced Toilet, Instruction Manual, Building Suggestions, and Installation & Maintenance Log. Nahcotta, Washington. 1999.

Recirculating Gravel Filters

- Washington State Department of Health. Recirculating Gravel Filter Systems – Recommended Standards and Guidance for Performance, Application, Design and Operation & Maintenance. Olympia, Washington. Draft document prepared by Lisa Brown, printed on May 19, 1999.

Stratified Sand Filters

- No meeting materials.

Subsurface Drip Disposal Systems Applied To Combined Wastewater

- Washington State Department of Health. Subsurface Drip Standards Development: TRC Discussion Points. Prepared by Richard Benson, outlining technical concerns and issues for presentation and discussion by the TRC. May 20, 1999.

Aerobic Treatment Units

- (Grey Copy) Washington State Department of Health. Aerobic Treatment Units – Version “A” Table. Draft table prepared by Mark Soltman, printed on May 19, 1999.
- (Yellow Copy) Washington State Department of Health. Aerobic Treatment Units - Recommended Standards and Guidance for Performance, Application, Design and Operation & Maintenance. Olympia, Washington. Draft document prepared by Mark Soltman, printed on May 19, 1999.
- (Green Copy) Washington State Department of Health. Aerobic Treatment Units - Recommended Standards and Guidance for Performance, Application, Design and Operation & Maintenance, pp. 6 - 11. Olympia, Washington. 2nd draft document prepared by Mark Soltman, printed on May 19, 1999.
- Sweeney RF and Newman TA. Aerobic Treatment Unit Study – Final Draft. Southwest Washington Health District, Clark County, Washington. August 9, 1998.
- Sweeney RF and Newman TA. Enhanced Treatment Unit Study (Sand Filter and Aerobic Systems) – Third Draft. Southwest Washington Health District, Clark County, Washington. February 28, 1999.

TECHNICAL DISCUSSION ATTACHMENTS¹

If you wish to obtain copies of the Technical Discussion Attachments, please contact Wayne Turnberg either by telephone [206-522-0132], fax [206-528-9839], or email [wayne.turnberg@doh.wa.gov].